

ABSTRACT OF THE DISCLOSURE

An electromechanical apparatus suitable for mounting on a vehicle wheel power for generating telemetry relating to the wheel including tire temperature and pressure. The apparatus includes a pendulum mounted to rotate freely relative to the vehicle wheel which is positioned from the wheel hub.

When the wheel is set to rotation, the pendulum freely hangs from the wheel hub under the influence of an off center counterweight having sufficient inertia to prevent rotation of the pendulum with the wheel.

The pendulum is used to position one or more magnets to be used to excite field coils, which are mounted with respect to the wheel hub to rotate with the wheel. The magnets and rotating coils cooperate to energize a power utilization circuit also mounted with respect to the wheel hub to rotate therewith. The utilization circuit may include such sensors as desired, typically including though a tire pressure gauge and tire and wheel hub temperature gauges. The apparatus is readily extended to incorporate a tire pressurization pump, which may be a solenoid pump powered indirectly from the rotating coils, or by a magnetic button pump.

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